

IN THE CLAIMS

Please amend the claims to read as follows:

Listing of Claims

1. (Canceled).
2. (Previously Presented) An OFDM signal collision position detection apparatus that detects collision positions of OFDM signals transmitted from a plurality of cells, comprising:
 - a known signal measuring section that measures reception power of a known signal;
 - a data signal measuring section that measures reception power of a data signal;
 - a data signal prediction section that predicts reception power of the data signal based on the measured reception power of the known signal;
 - a power comparison section that compares the reception power of the data signal predicted by said data signal prediction section with the reception power of the data signal measured by said data signal measuring section for each subcarrier; and
 - a collision position detection section that detects positions of data symbols colliding with each other between a plurality of cells by detecting positions where there is a large variation of said measured reception power of the data signal with respect to said predicted reception power of the data signal based on the comparison result obtained by said power comparison section, wherein:
 - said collision position detection section detects a collision when said measured reception power of the data signal is greater than a first threshold in a positive direction with respect to said

predicted reception power of the data signal or smaller than a second threshold in a negative direction.

3. (Canceled).

4. (Previously Presented) An OFDM reception apparatus that receives and demodulates an OFDM signal, comprising:

a known signal measuring section that measures reception power of a known signal;

a data signal measuring section that measures reception power of a data signal;

a data signal prediction section that predicts reception power of the data signal based on the measured reception power of the known signal;

a power comparison section that compares the reception power of the data signal predicted by said data signal prediction section with the reception power of the data signal measured by said data signal measuring section for each subcarrier;

a collision position detection section that detects positions of data symbols colliding with each other between a plurality of cells by detecting positions where there is a large variation of said measured reception power of the data signal with respect to said predicted reception power of the data signal based on the comparison result obtained by said power comparison section;

an error correcting decoding section that applies error correcting decoding processing to the received OFDM signal by reducing likelihood of data symbols at positions at which said collision position detection section has detected the collision;

an error rate calculation section that calculates an error rate of decoded data obtained by said error correcting decoding section; and

a threshold control section that changes a threshold at said collision position detection section according to the error rate calculation result, wherein:

said collision position detection section uses said threshold for detecting a position where said variation is large.

5. (Previously Presented) The OFDM reception apparatus according to claim 4, further comprising:

a reception quality detection section that detects reception quality of the received OFDM signal; and

a table that stores data of thresholds associated with the reception quality and outputs said threshold data corresponding to said detected reception quality to said collision position detection section.

6. (Previously Presented) The OFDM reception apparatus according to claim 4, further comprising:

a reception quality detection section that detects reception quality of the received OFDM signal; and

a table creation section that creates a lookup table showing a relationship between said threshold and an error rate when the threshold controlled by said threshold control section is used for each reception quality, wherein

said threshold control section sets an optimal threshold in said collision position detection section with reference to said lookup table.

Claims 7 and 8 (Cancelled).

9. (Currently Amended) An OFDM signal collision position detection method that detects collision positions of OFDM signals transmitted from a plurality of cells, the method comprising:

a step of measuring, by a signal power measurer, reception power of a known signal;

a step of measuring reception power of a data signal;

a step of predicting reception power of the data signal based on the measured reception power of the known signal;

a step of comparing the predicted reception power of the data signal with the measured reception power of the data signal for each subcarrier; and

a step of detecting positions of data symbols colliding with each other between a plurality of cells by detecting positions where there is a large variation of the measured reception power of the data signal with respect to the predicted reception power of the data signal based on the comparison result,

wherein detecting a collision when the measured reception power of the data signal is greater than a first threshold in a positive direction with respect to the predicted reception power of the data signal or smaller than a second threshold in a negative direction.

10. (Currently Amended) An OFDM reception method, comprising:

- a step of measuring, by a signal power measurer, reception power of a known signal;
- a step of measuring reception power of a data signal;
- a step of predicting reception power of the data signal based on the measured reception power of the known signal;
- a step of comparing the predicted reception power of the data signal with the measured reception power of the data signal for each subcarrier;
- a step of detecting positions of data symbols colliding with each other between a plurality of cells by detecting positions where there is a large variation of the measured reception power of the data signal with respect to the predicted reception power of the data signal based on the comparison result, by using a threshold for detecting a position where the variation is large;
- a step of applying error correcting decoding processing by reducing likelihood of data symbols at positions where the collision is detected;
- a step of calculating an error rate of the decoded data; and
- a step of changing the threshold according to the error rate calculation result.